PART 3 — COMMITTEE RECOMMENDATIONS

All of the Committee recommendations outlined in this section were developed following discussion of testimony from the Information Panel and others, as well as information provided by Committee staff. Linkages between recommendations and specific testimony have been noted at the end of recommendation explanations, where applicable. Representative comments and survey results from the Citizens Advisory Committee (CAC) are also shown.

Our recommendations fall into two broad groupings: those connected with the business practice known as asset management and other recommendations

Examples are included in several of the explanations which follow recommendation text. These illustrate how a recommendation could work, once implemented. These examples are simplifications and are not intended to be exhaustive. However, it is our intention that our recommendations be implemented so as to achieve all of the goals embodied in our Vision, Mission, and Values. The Technical Advisory Panel will be charged with ensuring that this is the case with regard to many of our key recommendations in the area of asset management (see page 42 for the text and explanation of the Technical Advisory Panel recommendation.)

ASSET MANAGEMENT - and related recommendations

The Committee recommends that a long-term, planned asset management process be extended to statewide use for transportation facilities.

We have included a document called 21st Century Asset Management: Executive Summary (October 1997, jointly sponsored by AASHTO and FHWA) as Appendix F to the Committee's report (page 147). The full document provides useful information as to how the asset management approach can be and is being used in the area of transportation infrastructure. Below, we repeat the excerpts which we used in the executive summary of our own report. We have added excerpts that pertain to the more technical aspects of the asset management approach.

Excerpts from 21st Century Asset Management: Executive Summary

> "Asset management is a systematic process of maintaining, upgrading, and operating physical assets cost-effectively. In the broadest sense, the assets of a transportation agency include physical infrastructure such as pavements, bridges and airports . . . Each transportation agency has a unique inventory of assets, many with common attributes." *—Page 2*

Excerpts from 21st Century Asset Management: Executive Summary continued:

"The practice of asset management:

- makes better and more objective information available to the decision making process;
- provides the critical ability to clearly demonstrate the implications of all investment alternatives;
- improves decision-making and enhances productivity, which translate into savings of time and money; and
- enables the agency to obtain maximum benefit from whatever level of funding the budget process provides." *—Page 2*

"Most agencies set explicit policies and goals and evaluate the success of their asset management strategies bases on trends in facility condition. Executives agree that new performance-based measures and knowledge of associated economic implications are needed to support more strategic decision-making. Pavement and bridge management systems are good examples of tools that facilitate performance-based monitoring." *—Page 5*

"New performance-based measures should be consistent with the decision-making environment of each organization and the needs of customers. For example, legislators and the general public are sensitive to performance parameters such as:

- smoothness of ride and overall quality of service;
- timeliness of travel and overall mobility on the system;
- accessibility provided to all areas by the system; and
- availability of facilities (whether facilities are always open)." *—Page 5*

"The change from measurement of condition to measurement of performance is consistent with the need for transportation agencies to be more customer-oriented. Performance-based measures will help decisions to become more strategic, and less condition-driven." *—Page 6*

Excerpts from 21st Century Asset Management: Executive Summary continued:

"The basic goals and methodologies of preserving and operating physical infrastructure under more stringent fiscal constraints are similar for government organizations and the private sector. Many business concepts and principles can be transferred from the private to the public sector, recognizing that performance measures used in each sector differ. The public sector focuses on service and cost-effectiveness, while the private sector aims to maximize the value of assets or return on investment. Another significant difference is that transportation agencies have a public responsibility, and at present usually cannot abandon unprofitable facilities. Private sector practices which are most transferable to the public sector are:

- concept that 'time is money' (time is of greater value in the private sector, due to the direct relationship to profit);
- profit motive (managed competition, innovative contracting methods, privatization);
- innovative procurement methods (not just low bid); and
- concept of product and value (not just cost)." *—Page 6*

"Newer technology makes the goals that asset management seeks to achieve feasible. Technology enables organizations to quickly and safely collect vast amounts of condition data, convert data into information, store and retrieve corporate data, information, and knowledge for use in decision-making, and compute numerous iterative calculations of funding scenarios." *—Page 7*

"Data collection and analysis, performance modeling, decision-making and program development, implementation, monitoring, and feedback are major components of any asset management process." *—Page 11*

Asset Management in Michigan

Based on what we have learned thus far, the components which a roadway (road and bridge) asset management process in Michigan would include are:

- A Strategic Planning element which provides the context for a system-wide asset management approach to achieving the Committee Vision;
- Performance measures, along with associated standards and criteria, which support the Committee's Vision, Mission, and Values;
- Inclusion of Life-Cycle Cost analysis in the setting of performance measures;
- A statewide Geographic Information System or GIS, for road and bridge information, containing consistent condition and usage data for all public facilities, regardless of jurisdiction;
- An evaluation and reporting process to the Legislature (and available to all transportation providers and customers), assessing progress toward short- and long-term attainment of the system performance targets and recommending adjustments as needed; and
- A Technical Advisory Panel, charged with development of components of the asset management process, such as performance measures and data collection methodology.

Functional Classification and Asset Management

Functional classification categorizes all roads in various groupings according to how they are used. A concise set of functional classifications is reflected in the bridge example (next page): arterial, collector, local-access. Roads and bridges have the added distinction of being either urban (located inside urban or urbanized areas) or rural. Freeways are included among the arterial category, but should often be considered separately due to their unique characteristics.

Functional classification is important to an asset management approach because it allows similar types of roads and bridges to be compared regardless of jurisdiction or geographic location within the state. For example, there are arterial roads everywhere in the state and under all types of jurisdiction (state, county, or city). Thus, data can be gathered about all arterials, or urban arterials, or rural arterials, and this information can be used in the development and evaluation of performance measures. The entire analysis can occur on a jurisdictional-neutral basis, which is appropriate to the system-wide, holistic approach we recommend.

A Simplified Asset Management Example

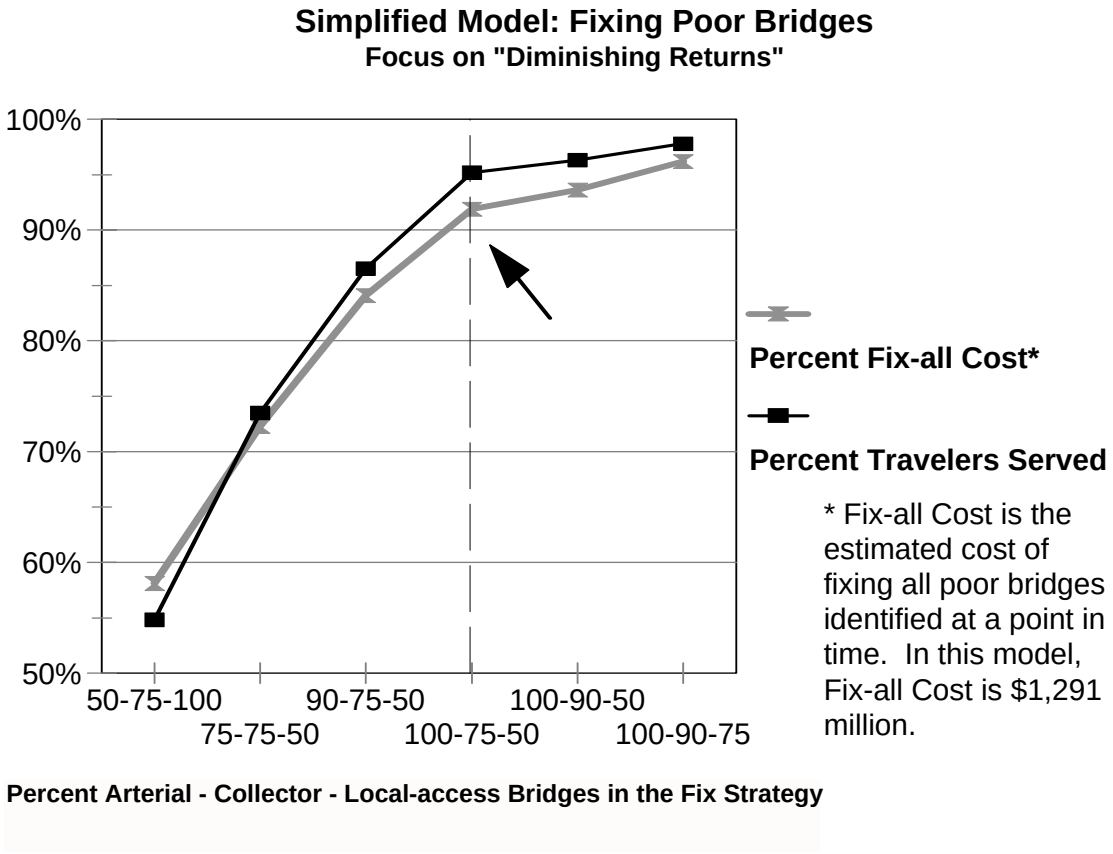
Because data on bridges is available for all jurisdictions, bridges can illustrate how an asset management approach will help set priorities for infrastructure investments in Michigan. There are currently 10,718 highway bridges (length of 20 feet or greater) in the state and of these, 2,116 were rated "poor" or structurally deficient at the time of this analysis. Various strategies for fixing these bridges ("fix strategies") may be demonstrated. Stratifying the bridges by functional classification (arterial, collector, local-access) provides a way to rank strategies along performance measure criteria that support the Committee mission statement and values.

An example is illustrated by the graph on page 38. As a Committee, we identified customer service as our highest value or priority, followed by cost-efficiency. The graph is based upon these values; however, we emphasize that simplified assumptions have been used. For instance, it is assumed that the level of customer service can be equated to and represented by the level of Average Daily Traffic (ADT). In reality, we recognize that there are other factors which have a bearing on the level of customer service, such as the role a bridge plays in serving the statewide, regional or local economy; or whether water, a highway facility, a railway, or a pedestrian way is being bridged. Additional factors which determine a bridge's role in the overall transportation system include safety (fire truck and emergency vehicle use), school bus use and farm-to-market traffic, all of which are impacted if the bridge is closed or has weight restrictions.

Functional classification (arterial, collector, local-access) rather than jurisdiction is used in the example. There are arterial, collector, and local-access bridges under the jurisdiction of each of the three main roadway agencies: the state, the county road commissions, and the municipalities. Functional classification enables all arterial bridges, for example, to be placed in the model with equal respect, regardless of ownership. The same is true of collector and local-access bridges. By focusing on the way a bridge is used, rather than on who owns a bridge, characteristics which are common across jurisdictions are modeled.

Given the available information, we saw that a fix strategy which addressed more arterial bridges than collector or local-access bridges resulted in more customers served, at a given cost level. The reason: arterial bridges, on average, have a much higher level of traffic, or ADT, than do collector or local-access bridges. Again, this result follows from the simplified assumption that customer service is represented by ADT.

Ultimately, state and federal dollars are distributed to the jurisdictional agencies and they make the spending decisions for their facilities. Bridges with a current rating of "poor" are a relatively small subset of all the facilities which would be addressed by a multi-year investment strategy. In recommending the asset management approach, we are recommending the development of a set of tools that can guide the decision makers toward attainment of our Vision, Mission, and Values.



The dotted line on the graph represents the point of diminishing returns in the simplified model. Up to this point, adding more arterial bridges to the fix strategy increases the number of customers served at a faster rate than the rate of increase in costs. Beyond the dotted line, when all arterial bridges have already been addressed and more collector and local bridges are added to the fix strategy, the number of customers served continues to increase. However, the rate of increase in costs is now faster than the rate of increase in customers served.

Since this model is based upon simplified assumptions, it is not meant to lead to specific conclusions as to how many arterial, collector and local-access bridges are in the “ideal” strategy for fixing poor bridges. However, as components of the asset management process are developed and implemented —the statewide GIS, performance measures, and so forth—our ability to model, rank, and select from among various strategies will be greatly improved.

Federal Financial Reporting Requirements and Asset Management

New financial reporting requirements for state and local governmental infrastructure assets have been established through the Government Accounting Standards Board Directive No. 34, or GASB-34. Effective dates for complying with the requirements vary according to total annual government revenues and will be phased in through the year 2006.

In addition to current reporting methods, GASB-34 requires new financial statements to use accrual accounting for all government activities, making governmental accounting methods more similar to those used in the private-sector. All revenue and costs incurred in a year will be reported, rather than just those received and paid in the current year. Thus, all current and long-term assets and liabilities (infrastructure and debt) will be reported in balance sheets.

For road agencies, GASB-34 requires that financial statements contain an engineering assessment of the condition of the agency's current physical assets. In addition to a statement of financial position, the agency will forecast the rate of deterioration in its physical plant. The agency will also demonstrate a means of prioritizing the investment needed to preserve its assets.

The asset management approach outlined in this report will comply with the requirements of GASB-34.

Specific Testimony Linked to the concept of Asset Management:

- The *Michigan Municipal League (MML)* in their testimony recommended that the new Act 51 legislation place emphasis on existing repairs before building new roads.
- The *Eastern Border Transportation Coalition* expressed the view that maintenance is critical and deferred maintenance, which can occur without an approach like asset management, is especially dangerous.
- The *Michigan Department of Transportation (MDOT)* requested that the new Act 51 legislation mandate a system of prioritization of transportation investments. *MDOT* also called for reforms requiring increased accountability and effectiveness like competitive bidding and the creation of regional road agencies.
- The *Michigan Business Roundtable* proposed the development of a rational, consistent jurisdictional structure for road building and maintenance similar to the asset management approach. They also recommended the establishment of a common set of priorities where funding follows needs and addresses infrastructure maintenance as well as growth. This too, reflects the basic principles of asset management.
- The *Citizens Resource Council* in their testimony and subsequent report to the committee recommended adopting strategies that promote priority determination and administrative efficiency.

Representative Comments from CAC members with regard to Asset Management:

- ". . .A long term, planned asset-management approach on a statewide basis . . . is an appropriate and long-overdue process to determine how transportation construction and maintenance dollars should flow. The railroad industry agrees with the asset-management approach." - *Michigan Association of Railroads*
- "Road and transit agencies should follow the principals of 'asset management' in their business operations."- *Private Sector Members of the CAC: Michigan Concrete Paving Association, (MCPA), Michigan Chamber of Commerce (MCC), MRBA (Michigan Road Builders Association), Michigan's Heavy Construction Association (AUC), and Michigan Asphalt Paving Association, Inc. (MAPA*)
- CAC survey response to our Asset Management recommendation: 82% agree, 18% disagree (see Appendix G, beginning at page 149, for detailed survey results).

COORDINATE EXISTING RESOURCES IN A STATEWIDE GIS - Asset Management related

The Committee recommends that road and bridge data for all jurisdictions be collected and maintained in a statewide Geographic Information System (GIS), under the direction of a Technical Advisory Panel, and through the coordination of existing resources.

The long-term evaluation and management of our transportation assets will require data for all elements of the roadway infrastructure. This data must be consistent across jurisdictions, as to type of item collected, methodology, and frequency of collection, and must be consistently and regularly analyzed. It will be necessary to consider the existing and future data needs of all transportation infrastructure providers, including federal reporting requirements. In this way, duplication of effort in collecting and storing data would be minimized.

The most up-to-date technology currently available for the storage, maintenance, and analysis of this data is called a Geographic Information System, or GIS. There are existing GIS resources in Michigan, including the efforts of the Michigan Technological University in developing RoadSoft and the Michigan Information Center (MIC) work on the Geographic Framework project. RoadSoft is used by most county road commissions and many municipalities. The MIC, located within the Michigan Department of Management and Budget, is working cooperatively with MDOT and other state agencies, as well as metropolitan planning organizations and other local agencies. Rather than "reinventing the wheel," we recommend that such existing resources be coordinated into a statewide GIS.

As an example of data already being collected, the Federal Highway Administration (FHWA) requires National Bridge Inventory data be submitted biennially. MDOT and about one-third of the counties gather some additional information while they conduct their bridge inventory to provide data needed to run PONTIS, a bridge modeling program. The remaining counties and cites should be required to collect the additional information and provide it as part of the National Bridge Inventory data collection effort.

Another example includes the federally-required Highway Performance Monitoring System (HPMS). FHWA requires HPMS data be collected annually for roads eligible for federal aid, through samples of arterial and collector functional systems and certain area-wide summary information for urbanized, small urban, and rural areas. The data reflects the extent, condition, performance, use, and operating characteristics of the nation's highways, and federal funding is partially based on the results.

Coordination of bridge and road data collection is essential so that performance measures for the surface transportation system as a whole can be developed and evaluated. This data will also be used to value these assets and determine whether disinvestment is occurring, so as to further the asset management approach on a statewide basis.

A legislative appropriation should cover the costs of establishing, managing and maintaining the centralized data. This appropriation should be deducted from the Michigan Transportation Fund (MTF), prior to distributions to other transportation agencies. Agencies who comply in a timely manner with agreed upon data requirements should be rewarded; failure to comply should subject a road agency to penalties and/or withholding of such agency's MTF distribution.

Specific Testimony Linked to Centralized Data

- The *County Road Association of Michigan* and the *Michigan Municipal League* are working cooperatively in an effort to update and identify condition information on all roads. The *Citizens Transportation Coalition* also testified in favor of a study to be used as a baseline for ongoing data collection. CRAM also testified that its road commissions are implementing pavement management systems such as RoadSoft.
- The *Metropolitan Planning Organizations* testified in favor of the development of a profile through a joint effort between MDOT, CRAM, and MML, and coordinated by MPO's and Regional Planning Organizations to identify the current condition of the transportation system in the state.
- The *Citizens Research Council* testified that strong record keeping allows transportation agencies to identify the age and condition of a road and a history of the fixes. CRC further stated that if a system of record keeping is successfully implemented, it can be a powerful tool in administering the highway system and that without a database to support the needs of those maintaining the highway, 'needs' is just a word.

Representative Comments from CAC members with regard to a Statewide GIS:

- "There should be a more precise estimate of the types of data that will be required and the anticipated costs and revenue sources for this effort . . . " - *CRAM*
- "We support the creation of a 'statewide Geographical Information System' to serve as a central database"- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*

CREATE A TECHNICAL ADVISORY PANEL - Asset Management related

The Committee recommends that a Technical Advisory Panel be responsible for oversight of the components of the asset management process.

Membership for the Technical Advisory Panel could include representatives from the following:

- 3-C Transportation Planning Directors' Association (representing Metropolitan Planning Organizations)
- County Road Association of Michigan
- Michigan Association of Counties
- Michigan Department of Transportation
- Michigan Municipal League
- Michigan Public Transit Association
- Michigan Township Association
- Other parties with a transportation or state economic interest

Responsibilities for the Technical Advisory Panel may include:

- Develop consensus regarding the responsibility for, type, methodology, and frequency of data to be collected for the statewide GIS;
- Prepare a Request for Proposal (RFP) for a third-party to manage, maintain, and analyze the statewide GIS, including coordination with existing third-party data collection and management technology, such as RoadSoft and the Geographic Framework (a representative from the third-party awarded the RFP will also be added to the Technical Advisory Panel or task force membership);
- Define technical performance measures for the asset management process, along with the associated standards and criteria, which support Committee goals and values;
- Develop a definition of maintenance which is consistent across jurisdictions;
- Develop the appropriate financial thresholds for the amount of road maintenance work on which competitive bidding by pre-qualified bidders may be allowed;

- Develop consensus as to the procedure for conducting a statewide functional classification review, using accepted federal guidelines;
- Develop standards, criteria, and performance measures for the designation of a cross-jurisdiction all-season road network; and
- Prepare periodic, system-wide performance reports which describe progress toward the attainment of system goals and objectives as defined by the performance measures developed as part of the asset management process.

Once the Technical Advisory Panel reaches consensus, this will result in:

- Quality information which is universally accessible and useable;
- Enhanced trust among the transportation providers/agencies;
- Greater understanding among the general public regarding the value, condition, operation and performance of transportation infrastructure in Michigan; and
- Enhanced capability to prioritize transportation investments at all levels.

Representative Comments from CAC members with regard to a Technical Advisory Panel:

- ". . .the number of members [on the panel] outside of the transportation realm be limited in number" - *Michigan Association of Airport Executives*
- "User groups, including the Michigan Association of Railroad Passengers, should be included in the Asset Management Technical Advisory Panel if it is created."- *Michigan Association of Railroad Passengers*
- "There should be additional members representing the private sector road building industry [MRBA] and Michigan's businesses [Michigan Chamber of Commerce]"- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Technical Advisory Panel recommendation: 82% agree, 18% disagree (see Appendix G, beginning at page 149, for detailed survey results).

CONDUCT A STATEWIDE FUNCTIONAL CLASSIFICATION REVIEW - Asset Management related

The Committee recommends that a systematic, statewide review of National Functional Classification (NFC) designations be conducted for roads under all jurisdictions to ensure they are appropriately designated according to their use, per federal guidelines.

The asset management approach requires that all road segments have the appropriate functional classification determination. Data collection needs, appropriate performance measures, and the ensuing investment priorities may vary by the functional classification assigned to a road segment. In addition, the statewide asset management approach to transportation infrastructure takes a system-wide view of the roadway network, with an emphasis on road function rather than road ownership.

Thus, an up-to-date review of functional classification for all roads is critical. The classification system identified in our recommendation, National Functional Classification or NFC, is used throughout the United States. This is germane to the issue of comparing the performance of our transportation system with that of other states, as directed by our Vision:

> "In ten years Michigan will have the best multi-modal transportation system in North America **as compared to other states** and countries and as measured by customer satisfaction." *—emphasis added*

NFC is also the basis for establishing eligibility for federal road and bridge funding. The Federal Highway Administration oversees the process of assigning and revising NFC designations but state highway agencies have the responsibility of applying federal guidelines and implementing the system in their respective states.

Functional classification terminology in brief:

- *Freeways* include the Interstate system and other expressways that have complete access control
- O*ther arterials* include major highways that are not freeways
- *Collectors* carry an intermediate level of traffic and have a distributing role
- *Local-access* roads and streets primarily provide direct access to property, whether in residential or rural areas

Note that the terms *local*, *county local roads* and *city local streets* refer to ownership or jurisdiction, and do not necessarily correspond with the functional classification of *local-access*. To varying degrees, all road agencies in Michigan have local-access roads under their jurisdiction.

Distinguishing a freeway from any other kind of road is a matter of identifying certain physical characteristics (the freeway has on and off ramps, a median separating multiple lanes, grade separations at intersections, and so forth). In order to determine whether a road should have the classification of arterial or collector, however, a number of functional criteria are used. These include: location (whether urban or rural); level of traffic (as measured by Average Daily Traffic or ADT); type of "traffic-generator" served (such as a county airport or a small town in the countryside, or a regional shopping mall or sports arena in an urbanized area); and overall spacing and connectivity within the transportation system as a whole.

Institutional Roads—In addition to roads under the jurisdiction of the three types of road agency (the state, the county road commissions, and the municipalities), there are also institutional roads, most of which are under the jurisdiction of the fifteen public universities in Michigan. To the extent that institutional roads are open to the public, we recommend that they be treated the same as other public roads with respect to NFC. If any institutional road meets the criteria to be classified as a collector or arterial, it may become eligible for federal aid. However, in order for the institution to receive road funding directly from Act 51, further legislative changes would be required which we are not recommending at this time. Instead, a jurisdictional transfer of the arterial or collector institutional road to an adjoining county or municipal road system could increase the funding available for that road.

Federal legislation gives MDOT the responsibility to conduct the statewide National Functional Classification review, with the cooperation of the Metropolitan Planning Organizations, county road commissions, and incorporated cities and villages (these participants are also defined in federal legislation or regulations). To further the consensus building called for by the asset management approach, we recommend that the procedure for the National Functional Classification review be a matter of general agreement among the members of the Technical Advisory Panel, subject to conformity with federal guidelines.

The goals for the statewide functional classification review of roads are classifications which:

- Identify roads primarily by function, and secondarily by ownership
- Reflect current (and future, where appropriate) road use
- Take regional differences into account
- Follow agreed upon guidelines consistently across the state

Once such a statewide review of functional classification is completed, other elements of the asset management process will be able to proceed on a more accurate basis.

Specific Testimony Linked to a Statewide National Functional Classification Review:

- The *Community Transportation Coalition* recommended that the current practice of cooperative review of road functional classification continue on a road-by-road basis. Prior testimony from the *MPOs (a CTC member),* advocated a more systematic, statewide approach.
- *MDOT* recommended that a formalized commercial backbone or secondary network of roads be developed.

Representative Comments from CAC members with regard to a Functional Classification Review:

- "It is important to relate functional classification to asset management." - *Executive Office*
- "Conduct a functional classification review and identify the state's priority commercial routes." - *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Functional Classification Review recommendation: 100% agree, 0% disagree (see Appendix G, beginning at page 149, for detailed survey results).

DESIGNATE A CROSS-JURISDICTION COMMERCIAL NETWORK - Asset Management Related

The Committee recommends that the asset management process include standards, criteria, and performance measures for the designation of an all-season road system, serving all significant points of loading origin and essential commodity haul routes, and composed of routes from all jurisdictions as needed for connectivity and continuity.

Commercial vehicles need a connected and continuous all-season system of roads. The all-season portion of the state trunkline system combined with all-season county roads and city streets forms a partial network, but there are system gaps.

Following upon a legislative requirement in the Fiscal Year 2000 transportation appropriations bill, all-season road information for counties will be incorporated into a Geographic Information System, or GIS. The format used will be compatible with the statewide GIS in our recommendation as a Committee. All-season information is currently available for state

trunklines; similar information for city and village streets should also be incorporated within the GIS format.

Once we have information from all jurisdictions, we will be able to identify any cross-jurisdiction gaps in the all-season network. The GIS will also have the capability to store information about significant points of loading origin and essential commodity haul routes. This will lead to analysis not only of system gaps, but of how to "fill the gaps" so as to have the greatest impact in serving the state's major economic interests.

The recommended membership of the Technical Advisory Panel is well-suited to establishing the standards, criteria and performance measures for a cross-jurisdiction commercial network which is all-season.

Representative Comments from CAC members with regard to a Commercial Road Network:

- "An advantage of designating a commercial route and having that the responsibility of a single level of government is that revenues from commercial trucks, vehicles that travel almost exclusively on those routes, could be funneled directly into the funding of those routes." - *Executive Office*
- "Improve all priority commercial routes into an 'all season' standard . . . to a consistent and uniform standard across the state, regardless of who owns the roads."- *Private Sector Members of the CAC, MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Commercial Road Network recommendation: 94% agree, 6% disagree (see Appendix G, beginning at page 149, for detailed survey results).

DEVELOP PERFORMANCE MEASURES - Asset Management related

The Committee recommends that system performance measures, along with associated standards and criteria, be selected by the Technical Advisory Panel for all elements of the roadway infrastructure.

The development of appropriate standards and performance measures is an essential element in the development and implementation of an asset management process. Without them, we will not be able to accurately assess whether or not we are achieving our identified goals.

Performance measure selection should:

- be in accordance with the principles of asset management;
- measure the performance of the system, not just its condition;

- support Committee values; and
- reflect expectations which vary by roadway use or functional classification (i.e., higher standards for higher classifications).

A performance measure is simply a means of evaluating the progress toward achievement of a specific goal or objective. As recommended, centralized data will be collected for all roadway infrastructure, and will be maintained in a statewide Geographic Information System, or GIS. This data, which will be consistent across jurisdictions, will enable the Technical Advisory Panel to develop performance measures for incorporation into the long-term, planned asset management process. The Technical Advisory Panel will also develop the technical standards and criteria for the evaluation of performance measures.

The performance measures, standards and criteria should be adjusted according to the function or use of categories of road or bridge. Higher use facilities should have higher performance standards. For example, freeways carry a high level of traffic, a relatively high percentage of which is commercial, and the most long-distance or through-trips. If freeways are held to the highest performance measure expectations, this will ensure that a large number of customers will be well served, thus supporting the Committee's number one value. It would then follow that a different standard of performance should be expected of other functional use categories.

Performance Measure Examples

The following is a specific example of how goals, standards and performance measures work together. Two goals already identified by MDOT for bridges on the state trunkline system are:

> Achieve a"good" rating on 95% of freeway bridges by 2008, and
> Achieve a "good" rating on 85% of non-freeway bridges by 2008.

The standard, in this example, is the rating of "good." The performance measure, that would enable one to determine whether or not the goal is being achieved, is the "percentage of freeway bridges rated good in year X." We believe similar goals, standards and performance measures should be developed for roads and bridges at all levels of usage, in keeping with our vision, mission and values.

Another example pertains to the system of roads under county or city jurisdiction, specifically, the subsystem which is all-season. Following the pattern of the MDOT bridge example, above, the goal for all-season county roads and city streets could be:

> Achieve a connected and continuous all-season system, serving all significant points of loading origin and essential commodity haul routes which are not otherwise served by all-season state highways, by the year X.

The standard could be attainment of design guidelines for all-season roads on those routes which comprise the required network in conjunction with all-season state highways; in other words, a cross-jurisdiction commercial network. The performance measure could be the percentage of significant points of loading origin and essential commodity haul routes served by the entire all-season network in year X.

Other Performance Measures

In a similar manner, performance measures will be developed by the Technical Advisory Panel to address all of the goals embodied in our Vision, Mission, and Values. These include those relating to safety, congestion, intermodalism, and the recognition of social, environmental, and aesthetic issues.

Specific Testimony Linked to Performance Measures

- *MDOT* testified that road agencies should be required to develop performance standards to measure their road investment strategies.
- The *Citizens Transportation Coalition* testified that once a baseline is established, ongoing data collection will provide the information needed for a performance assessment.

Representative Comments from CAC members with regard to Performance Measures:

- "In order to implement the principals of asset management, the managers of the asset need a measure of the investment required to achieve suitable performance of the asset" - *CRAM*
- "Performance standards also should reflect the multi-modal nature of the Funding Study Committee's mission."- *Michigan Association of Railroad Passengers*
- "There should be more focus on identifying road modifications and traffic control device improvements that could reduce the incidence of motor vehicle crashes."- *Michigan Association of Railroad Passengers*
- CAC survey response to our Performance Measures recommendation: 88% agree, 12% disagree (see Appendix G, beginning at page 149, for detailed survey results).

ENCOURAGE ADDITIONAL REGIONAL COORDINATION - Asset Management related

The Committee recommends that the asset management process be a vehicle to provide incentives to reward additional regional coordination and planning among and between road and transit agencies.

Transportation costs increase because of duplicative efforts by different agencies, or from a lack of communication between agencies working on different aspects of the same transportation problem. In addition, services to customers may suffer because of artificial barriers to coordination imposed by regulations or jurisdictional boundaries. In order to effectively address regional transportation problems, transportation and other agencies, both public and private, need to increase their level of coordination in their planning and construction activities.

We recognize that much regional coordination in these areas already exists. By promoting additional regional coordination between transportation providers and coordinating activities of public and private transportation, transportation agencies will achieve greater economies of scale, increasing cost savings and efficiencies. Further, regional coordination will improve connectivity in the provision of transportation service across and within jurisdictions and among modes.

Coordination between state, regional, local, public and private entities is also needed to facilitate efforts to anticipate and accommodate growth, and to promote economic development within Michigan. Regional coordination will also help enhance the transportation environment and mitigate environmental impacts related to transportation development.

From an asset management perspective, data must be collected for all elements of the roadway infrastructure and that data must be consistent across jurisdictions, as to type of item collected, methodology and frequency of collection. Increased regional and statewide coordination of bridge and road data collection is essential so that performance measures for the surface transportation system as a whole can be developed and evaluated.

Advancing technology now gives transportation agencies the capability to compile data on a regional scale and implement and coordinate regional projects accordingly. Michigan needs to take advantage of this technology to make the most cost effective transportation investments and provide the best service to our customers, the traveling public.

Specific Testimony linked to Regional Coordination:

- MDOT argued in favor of the promotion of regionalism in their presentation to the committee. The suggestion to the committee was to recommend reforms for increased accountability and effectiveness such as the creation of regional road agencies.
- The *Michigan Business Roundtable* also suggested the committee make a recommendation to promote regionalism. They wished to encourage the development of regional authorities to address funding mechanisms and planning prioritization for non-interstate roads.
- *Dr. John C. Taylor, of Wayne State University*, also urged the committee to make a recommendation supporting the creation of regional authority. He suggested allowing counties to combine into regional authorities. He said those counties that created regional authorities should be rewarded with a larger share of the Michigan Transportation Fund.

DEVELOP A UNIFORM DEFINITION OF MAINTENANCE - Asset Management related

The Committee recommends that the Technical Advisory Panel develop a uniform definition of maintenance and that the Legislature revise current transportation laws to incorporate the definition.

Currently there are numerous terms, definitions, and references related to maintenance in both state and federal legislation. Examples include routine maintenance, winter maintenance, capital preventive maintenance, pavement maintenance, heavy maintenance, bridge maintenance, and maintenance. Each term has a different meaning and may include reference to specific aspects of maintaining a road. Added to this source of confusion is the fact that these terms may have different meanings when applied at the state, county, or municipal level, or in different statutory contexts.

The asset management approach will work best when standards for maintenance are based upon definitions that are uniform across jurisdictions. Performance measures for maintenance should be stratified by road use (for example, higher standards set for freeways and other arterials versus those for local-access routes), but not necessarily by ownership. The recommended membership of the proposed Technical Advisory Panel will be able to resolve these issues. They should also make a clear distinction between routine maintenance activities and capital preventive maintenance activities which extend the useful life of the road.

Examples of legislation which should be reviewed, pending action by the Technical Advisory Panel, include: Act 283 of 1909 (maintenance is defined as a basic activity); Act 51 of 1951

(various definitions that are either all inclusive or specific to a certain type of maintenance); Act 139 of 1972 (defines maintenance of "private roads"); and Sections 116 and 119 of Title 23 of the United States Code (defines preventive maintenance for certain classes of road).

Specific Testimony linked to a Uniform Definition of Maintenance:

- In their testimony, the *Michigan Business Roundtable* asked the committee to recommend the establishment of a common set of priorities where the funding for maintenance follows the needs of the roads and community. They also suggested that the committee address the issue of infrastructure maintenance being used as a tool of growth.
- The *Michigan Association of Townships* requested that the committee recommend or create a clear definition of maintenance as well as a definition of maintenance activities. This request sprang from the struggles between counties and townships about maintenance and routine maintenance activities.

Representative Comments from CAC members with regard to a Uniform Definition of Maintenance:

- "...within the definitions, enforcement and monitoring would be addressed" - *Michigan Council for Independent Living*
- "Develop a uniform definition in state law for 'maintenance in road repairs'."- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Uniform Definition of Maintenance recommendation: 94% agree, 6% disagree (see Appendix G, beginning at page 149, for detailed survey results).

PROVIDE BASE LEVEL OF FUNDING FOR ROUTINE MAINTENANCE - Asset Management related

The Committee recommends that any asset management-based formula take into account the need for a base level of funding for the routine maintenance of all roads.

The asset management process, once in place, will include performance measures and standards for maintenance on all roads. The standards will be stratified by use or functional category (for example, higher standards set for freeways and other arterials versus those for local-access routes).

Roads that have the functional classification of local-access are by definition the roads whose primary purpose is to provide access to property rather than to provide mobility; local-access roads also tend to have relatively low traffic levels. According to federal legislation, local-access

roads are not eligible for federal-aid. At 79,948 miles, urban and rural local-access roads comprise the largest functional system by route mileage (67% of all roads), yet they account for only 10% of the statewide Annual Vehicle Miles Traveled (AVMT). While local-access roads are relatively lightly used, their property access role remains important. They are a part of the transportation infrastructure that needs to be maintained.

We recognize that a sound asset management approach would allocate a base level of funding for the routine maintenance of local-access roads. The higher systems (freeways, other arterials, and collectors) would require a different consideration of baseline maintenance needs based on the overall condition of the asset. This would be consistent with the performance standards set for freeways, other arterials, and collectors.

Currently, routine maintenance is performed at the discretion of the jurisdiction. There is no specific set aside for routine maintenance.

Snow Removal

In Michigan, any discussion of maintenance must take snow removal into account. Roads in the Upper Peninsula and Northern and Western Lower Peninsula receive large amounts of snow each year and localities within these areas of the state spend a large share of their maintenance money on snow removal.

Under the current Act 51 formulas, funding allocations for snow removal are different for all three jurisdictions. Snow removal funding for 53 counties (see Map 1 on page 55) is based on a 14 year snow fall average (1974-1987). The funding for cities and villages within the 53 counties is a partial reimbursement for those agencies having snow removal costs that exceeded the statewide average over those years. These funds come from earmarks from the counties and cities/villages share of the MTF and are distributed before the counties and city/village internal formulas are applied. There is no specific 'set aside' for snow removal within MDOT's share of the MTF. Snow removal for MDOT roads are funded from MDOT's share of the MTF.

As we begin to manage our assets, a base amount for snow removal could be reserved before any asset management-based formula is applied. This distribution could follow historical distribution levels for snow removal.

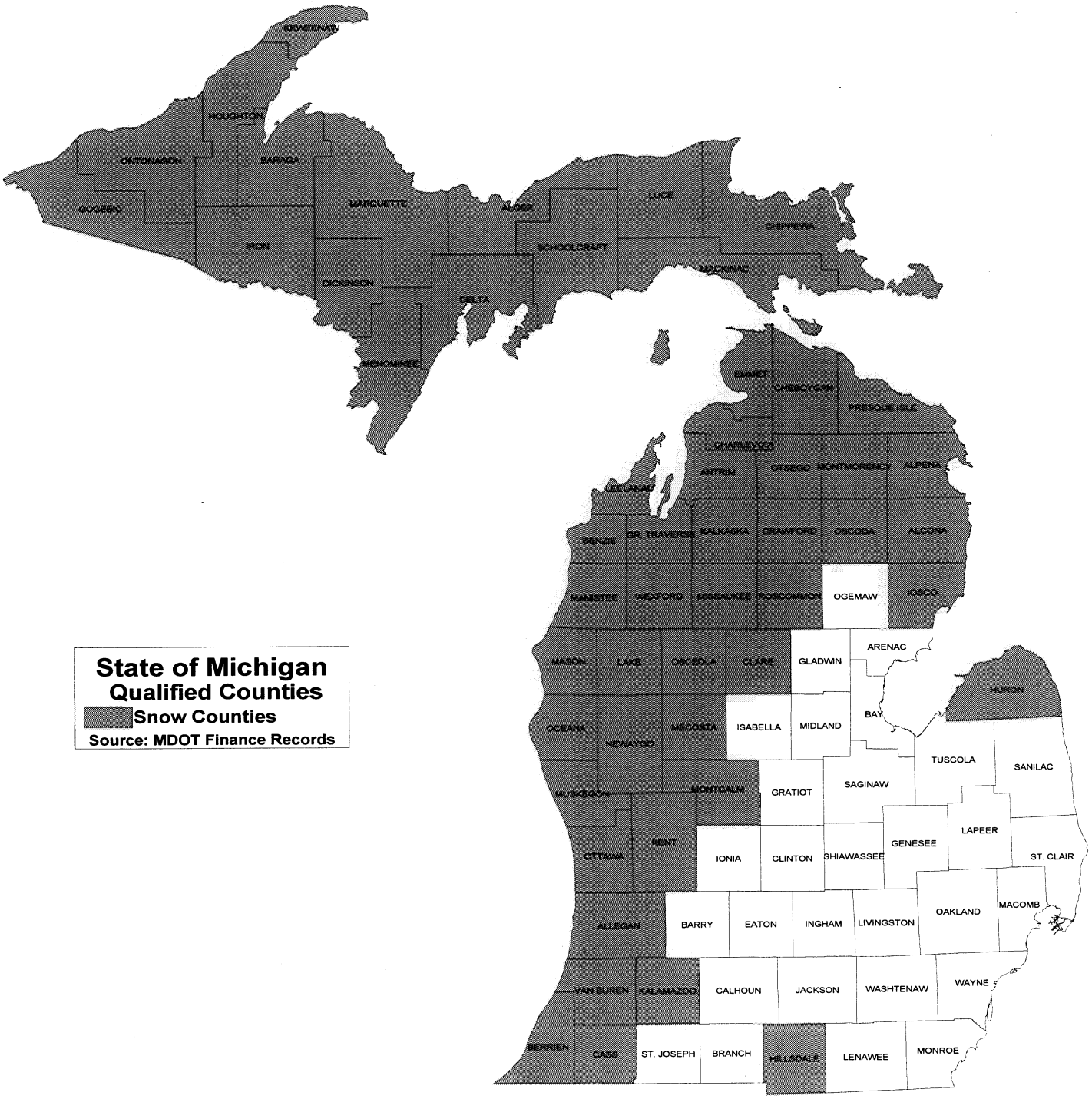
Specific Testimony linked to a Base Level of Funding for Routine Maintenance:

- The *County Road Association of Michigan's* first recommendation in their testimony was for the Committee to recommend base amounts for routine maintenance. They emphasized this in another point in their presentation where they said a formula only based on congestion or vehicle miles traveled would ignore their recommendation of providing a base level of monies for basic maintenance.
- *Dr. John C. Taylor, of Wayne State University*, in the context of county and city formulas, testified that while a substantial base level of funding for population and road miles is needed, incremental future funding increases should be tied more closely to VMT in each county and city/village.

Representative Comment from a CAC member with regard to a Base Level of Funding for Routine Maintenance:

- "...it is necessary to develop a formula for distributing the funds to serve as this base amount." - *Executive Office*
- CAC survey response to our Base Level of Funding for Routine Maintenance recommendation: 88% agree, 12% disagree (see Appendix G, beginning at page 149, for detailed survey results).

MAP 1



State of Michigan
Qualified Counties
Snow Counties
Source: MDOT Finance Records

UTILIZE LIFE-CYCLE COST-ANALYSIS - Asset Management related

The Committee recommends that roadway assets be managed so as to maximize performance at the lowest life-cycle cost, including agency first cost, lifetime maintenance cost, and user costs.

When a road agency makes a choice of design, materials, or maintenance strategy, it commits taxpayers and users to a stream of expenditures that will last for decades. These decisions inevitably balance first cost, maintenance cost and user cost. For example, in choosing a pavement material a road agency commits itself to a particular schedule of repair or reconstruction, and commits road users to a schedule of road closures for maintenance. Guidance is needed for balancing present *versus* future expenditures, and agency *versus* user costs. Where appropriate, that guide should be *lowest total cost over the life cycle of the asset, discounted to present value*.

The decision to defer any preventive maintenance is a far-reaching and potentially destructive one. The asset-management approach discourages deferred maintenance and ought to reward creative investment in preventive maintenance.

Specific Testimony linked to the Life Cycle Cost Approach:

- The *Michigan Business Roundtable* testified that life-cycle costs should be one of the criteria used in the development of a new bidding process. The rational used is that roads are not built for the lowest average cost over the life of the road because of the potential for large up-front costs.

ENCOURAGE DESIGN AND CONSTRUCTION WARRANTIES - Asset Management related

The Committee recommends that all road agencies seek warranties from construction contractors, where appropriate. Legislation should encourage experimentation with warranties covering the design and construction of roads and bridges, without mandating warranty details or particular applications.

Traditional road-construction practice is for agencies to specify design and materials in great detail, and depend on adherence by contractors to these specifications to ensure long asset life. Agencies (and taxpayers) bear all the risk for early failures.

For some classes of project, a better approach may be to specify the performance and life expectancy of the asset, and allow contractors to design the pavements, structures, or other features so as to achieve the specified performance at minimum cost. Contractors would be required to warrantee that the completed job will perform as demanded, and to repair it in the event of early failure. This approach is already in experimental use, and it may yield lower total cost and more rapid innovation. Possible penalties include higher first cost and difficulty in obtaining compliance. Legislation should permit and encourage this practice, but not impose restrictions on the process that impede free experimentation. Warranties should not be mandated where inappropriate, such as on projects where the contractor is not involved in the design.

Specific Testimony linked to Design and Construction Warranties:

- The *Citizens Research Council* testified in favor of process to streamline construction processes in that the contractor, not the road agency, designs the road repair and guarantees product performance. The contractor must submit a quality control plan to the road agency for approval and provide a bond to guarantee funds will be available to fix any failures.

Representative Comments from CAC members with regard to Design and Construction Warranties:

- "...contractors should be expected to stand behind their product for a period of time after completion." - *Executive Office*
- "The concept of obtaining warranties is a wonderful idea."- *Michigan Council for Independent Living*

CONTINUE CURRENT FORMULA DISTRIBUTION UNCHANGED - Asset Management related

The Committee recommends that the distribution percentages to road agencies in the current formula be continued unchanged until implementation of an asset management process, which may result in future distribution changes. Any future distribution changes should be phased in, to accommodate planned construction.

We recognize that it will take time to develop all of the components required to implement the asset management process. We also recognize that implementation of any asset management-based formula must be phased in, so as to accommodate planned construction. Therefore, we recommend that the distribution percentages to road agencies in the current formula be continued unchanged, in anticipation of the results of the asset management approach.

While not proposing a specific formula revision at this time, we recognize that a proposed asset management-based formula could result in a funding distribution which focuses on the function or use of a road, while taking into account the base level of funding needed for routine maintenance. This may (or may not) differ from the current funding distribution which is based on who owns or has jurisdiction over a road. We also recognize those factors which may aid in the development of the asset management-based formula, for example: Annual Vehicle Miles Traveled (AVMT, both regular and commercial); use or functional category (freeways, other arterials, collectors, and local-access roads); route mileage; lane mileage; type of place (urban, rural, population levels); and contribution toward economic development.

While this recommendation was made in consideration of state revenue distribution, we recognize that it also applies to the expenditure of federal monies. Federal funds are more restrictive, in terms of which roads and which categories of road work are eligible. While taking these restrictions into account, federal funds should also be distributed based on asset management principles, to the degree possible.

The implementation of the asset management approach will result in the selection of performance measures based upon Committee values. The analysis and investment decisions that result will provide a foundation for a potential funding allocation that will attain our Vision, Mission, and Values.

Specific Testimony linked to a Formula Recommendation:

- *Dr. John C. Taylor, of Wayne State University*, recommended that formulas for the counties and the cities include a greater component related to usage or VMT. Overall, he agreed with proposals that funds be allocated based on usage levels, and not necessarily by state, county or city. He also recommended that the share of funds devoted to "key economic impact roads" be increased.
- *MDOT* stated that the first priority of state raised revenue is the support of roads serving a statewide and regional purpose; that is, the high level system.

Representative Comments from CAC members with regard to a Formula:

- "The current distribution formula should be maintained until the data collection and Needs Study is completed. Once the evaluation is completed, utilizing asset management techniques in a holistic review of the entire system, a report should be submitted to the legislature."- *Michigan Association of Counties (MAC*)
- "Equitable funding, without major winners or losers, must be the highest priority of reform."- *Michigan Municipal League (MML*)

- "Funding intended for road and bridge repairs should continue to be used solely for road and bridge repairs."- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Formula recommendation: 88% agree, 12% disagree (see Appendix G, beginning at page 149, for detailed survey results).

TIE REVENUE TO PERFORMANCE - Asset Management related

The Committee recommends that the Legislature evaluate the Technical Advisory Panel's periodic performance reports and take appropriate action.

The statewide GIS, and other components of an asset management process, will provide current and consistent performance and condition information on all roads. This will make it possible for the Legislature, who have funding responsibilities for Michigan's transportation system, as well as system users and providers, to periodically compare road revenue with pavement condition, bridge sufficiency, levels of congestion and other criteria linked with performance measures. The result may be recommended changes to long-term investment targets and goals.

Over time, the system performance report may suggest that existing road-user fees should be changed, or new classes of fees considered. Variation in results from one part of the state to another, or from one class of roads to another, may indicate that investment formulas should be adjusted, or that new revenue sources be provided.

Comprehensive review by all interested stakeholders of system performance, road condition and revenue will create a "feedback loop" that is lacking at present. This approach is clearly preferred over an indexing approach, where automatic revenue increases or decreases are tied to a cost index.

Representative Comment from a CAC member with regard to linking Revenue and Performance:

- "The asset management system maintained by each road agency should be used for prioritizing spending on the roads for which it is responsible. The statewide asset management system should be used for assessing the adequacy of any funding formula and for assessing the adequacy of available funding." - *Executive Office*

* * * * * * *

Flow Chart 1 (page 60), provides an illustration of how many of our asset management-related recommendations interact.

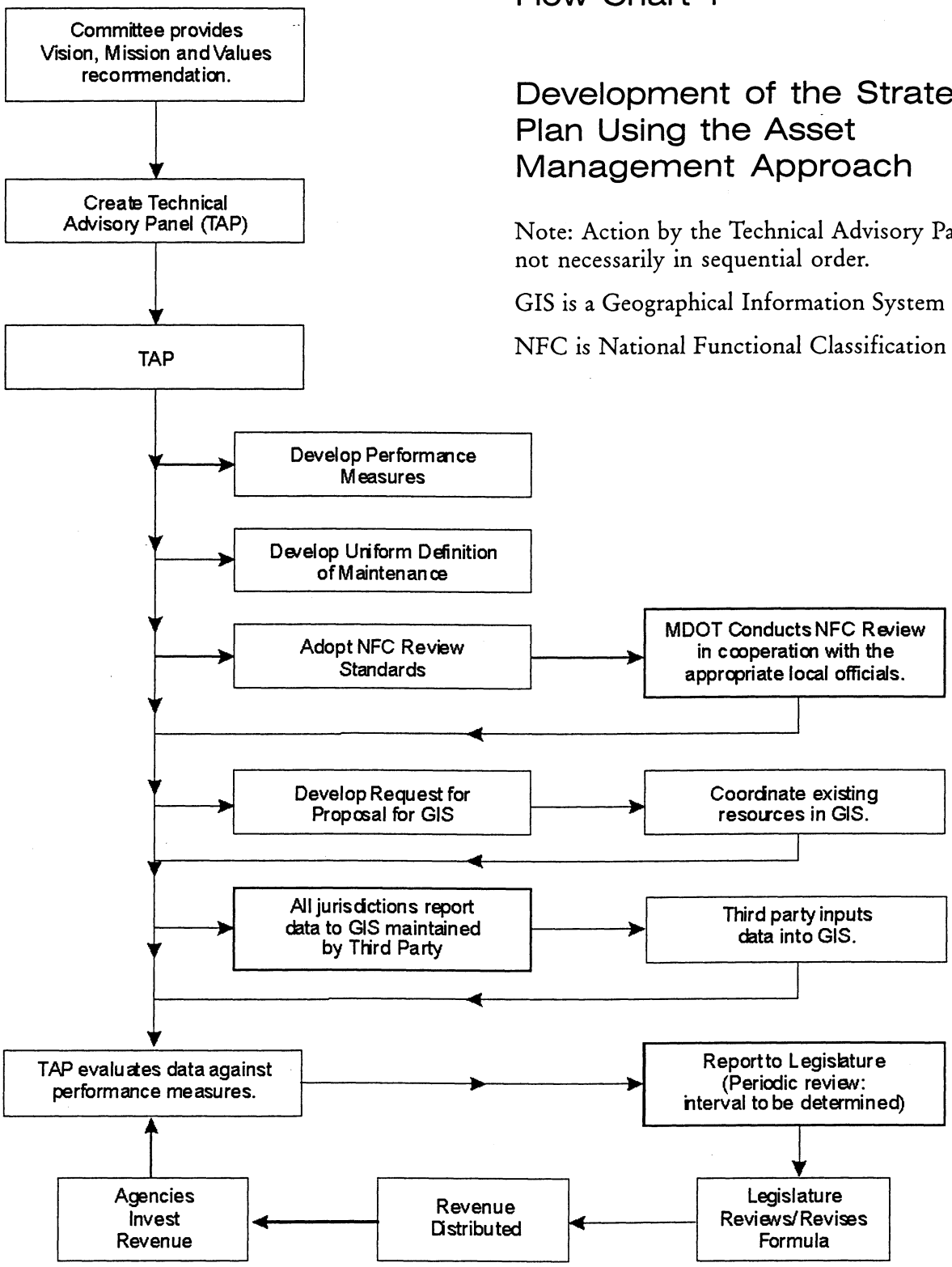
Flow Chart 1

Development of the Strategic Plan Using the Asset Management Approach

Note: Action by the Technical Advisory Panel is not necessarily in sequential order.

GIS is a Geographical Information System

NFC is National Functional Classification



OTHER RECOMMENDATIONS

COORDINATE LAND USE PLANNING

The Committee recommends that local officials coordinate with state and local road agencies as part of the planning process. Land development and transportation should be considered together, to maximize the utility of existing infrastructure and the effectiveness of new investment.

The issue of land use development is a complicated one having its root causes in dynamics that are often unrelated to the associated impacts upon the transportation network. These causes include influences such as life-style choices, the historical tradition of local control of land use, local taxation policies, the desire to expand the local tax base, increased job opportunities, and overall economic development.

Road and street agencies often must match new development with public road funds. Existing laws provide opportunities for controlling developments but these are not often used to their full advantage. Private investors, and local governments and permitting agencies, are obliged to coordinate impending land-use changes with road agencies through the submittal and approval of plats, and the submittal and approval of permits for driveways.

In addition, local zoning ordinances can be set up by cities, counties, and townships to ensure that the impact of development on traffic congestion and the efficiency of the transportation system is considered before a rezoning is approved. This can be done in relationship to changes in zoning, and approving special land use permits or planned unit developments. The site plan process also allows the opportunity to make modifications to developments which would minimize the impact on the transportation system.

These and other avenues for coordination and communication between local governments and transportation agencies should be used to their fullest. In some parts of the state, effective communication among all concerned stakeholders is already the norm; in other places, there is room for improvement. We feel that such communication and coordination must take place to ensure that the best use is being made of public and private investments.

Specific Testimony linked to Land Use Planning

- The *Community Transportation Coalition* encouraged the Committee to recommend land use planning strategies. They stated that the new Act 51 legislation should encourage programming and funding of appropriate road projects in conjunction with land use planning activities.

Representative Comments from CAC members with regard to a Uniform Definition of Maintenance:

- "Coordination of land use planning . . . should be encouraged as a two-way flow of information. Not only with the local officials relating land use plans to county road commissions and MDOT, but with the authority of county road commissions and MDOT to suppress land use plans that are inconsistent. . . " - *Executive Office*
- ". . .we recommend that state transportation projects adhere to and be integrated with county and township master plans."- *Michigan Association of Railroad Passengers*

INCREASE LOCAL GOVERNMENT ROLES

The Committee recommends that all three units of government that have the ability to levy ad valorem taxes for roads (counties, municipalities, and townships) be represented on county road commissions.

This issue was brought forward by representatives of the Michigan Township Association as a significant concern. Townships typically contribute local funds to advance county-road projects that are important to the township. Often, county road and bridge projects within township boundaries are contingent on local contributions. However, townships have no statutory place in the distribution of MTF funds, or in the setting of priorities by county road commissions. The conflict between township and county road commission priorities has occasionally been intense.

Extending the distribution formula to townships would yield a cumbersome allocation of small amounts to each township. Few, if any, townships want to assume responsibility for county roads.

We recommend that the structure of road commissions be amended to ensure a place for townships in the county road commissions' planning, project selection, and scheduling. County road commissions typically include one or several residents of townships, but there is no guarantee that township government will be represented on road commissions. If need be, the

number of county road commissioners should be increased to assure an adequate number of township representatives.

In making this recommendation, we recognize the issue of the township role in county road commission transportation planning and investment as among the most intractable of the many issues we considered. Up until our final meeting as a full committee on May 12, 2000, representatives of the interest groups most affected — CRAM, MTA, and MAC — worked to arrive at a consensus for an alternative recommendation. That consensus was not achieved in time for inclusion in our report. Yet, our process has resulted in the clear identification of the various points of view that will prove useful as the discussion shifts to the Legislature.

Specific Testimony linked to Local Government Roles:

- The *Michigan Township Association* urged the committee to make a recommendation improving representation on county road commissions. The association stated that the committee should recommend establishing a structure that more appropriately represents townships' needs by requiring that some county road commissioners be elected or appointed from outside the incorporated boundaries of cities and villages.
- *Dr. John C. Taylor, of Wayne State University*, also testified to the need for changes in the county road commission system. Dr. Taylor said that county boards should have the option to eliminate county road commissions and fold their activities into general county government, and that county boards should also have the option to increase the size of the road commission, to allow for increased township and geographic input.

Representative Comments from CAC members with regard to Local Government Roles:

- "Strongly support a direct role for townships in highway decisions within their jurisdiction."- *Michigan Township Association (MTA*)
- "The Michigan Association of Counties has no objection to expanding the number of county road commissioners to five from the current three members. However, we are opposed to singling out a particular government entity or organization that will have a required seat on the board." - *MAC*
- ". . .the underlying premise [of the recommendation believed] to be incorrect and the solution to lack focus . . . Act 51 does not need to substitute a legislative judgement for the will of the electors." - *CRAM*
- "Accountability begins with knowledge of the level of government responsible for certain functions. If those persons serving on county road commissions are not accountable for the traveling public, methods for selecting commissioners should be directly addressed." - *Executive Office*
- CAC survey response to our Local Government Roles recommendation: 59% agree, 41% disagree (see Appendix G, beginning at page 149, for detailed survey results).

EXPLORE ALTERNATIVE FUELS TAXATION

The Committee recommends that a system be implemented to explore alternative ways of generating transportation user fees. To this end, the Governor should create a special committee to look at alternative sources of revenue that could become viable alternatives to existing revenue resources.

Michigan obtains three fifths of its road fund monies from motor-fuel taxes. Alternative sources of fuel, such as compressed natural gas, hydrogen or electricity, are currently being developed on a limited basis but will one day be viable alternatives to gasoline and diesel fuel. When that day comes, changes in the motor fuel tax law will be necessary to protect Michigan's road financing philosophy of a user-supported system.

The following technologies appear to have the greatest chance of coming into use within the period likely to be covered by the new road-finance legislation.

- *Gaseous Fuels*: Michigan's motor-fuel tax law covers all likely future liquid fuels (Ethanol, methanol, alcohol-gasoline mixtures, liquified petroleum gases), including use of these fuels in fuel cells and methanol reformers. Michigan law does not cover gaseous fuels such as compressed natural gas and hydrogen. These fuels are in experimental use in Michigan and elsewhere.
- *Electricity:* no means has yet been proposed to charge electric vehicles for road use on a per-mile basis. A system of metering and billing would probably be required, similar to what our utilities currently use.

We recognize the need to create a revenue source that is not related to fuel of any type, but is directly related to use of the transportation system and addresses the damage caused by that use. One alternative would be to charge for transportation system use based on mileage reported periodically, as is currently done to some degree with motor carriers.

We also believe it is important that any replacement revenue is generated in an equitable manner. To this end, we recommend that the Governor create a special committee to look at alternative sources of revenue that could become viable alternatives to existing revenue sources.

SIMPLIFY THE DIESEL FUEL TAX COLLECTION SYSTEM

The Committee recommends that the Legislature simplify the total diesel fuel tax collection system.

The diesel fuel tax collection system presently in place is very complicated. The Legislature should simplify the overall diesel fuel tax collection system. One step in this direction could be collecting the tax from the highest taxable source - that of the refiner/wholesale distributor level. Another simplification step could be the elimination of unnecessary paperwork associated with the current system of discounts, rebates and surcharges.

The result of such simplification will be that revenues intended for transportation will be collected more efficiently and paperwork will be eased for truckers.

Representative Comments from CAC members with regard to the Diesel Fuel Tax:

- "This simplification would offer the state government savings by not having to process collections and refunds."- *American Association of Aviation Businesses*
- "Simplify and reform the collection of diesel fuel taxes - without the tax increase."- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*

ELIMINATE INTERDEPARTMENTAL TRANSFERS

The Committee recommends that transfers from the Michigan Transportation Fund, the State Trunkline Fund, and the Comprehensive Transportation Fund to other state government departments be eliminated.

In the fiscal year 2000, $69,238,900 will be transferred from the Michigan Transportation Fund, the State Trunkline Fund and the Comprehensive Transportation Fund to various departments, as shown in the table below:

Fiscal Year 2000: Interdepartmental Transfers from the MTF, STF, and CTF			
Receiving Department	**MTF**	**STF**	**CTF**
State	$56,830,800		
State Police		$6,305,700	
Attorney General	$2,475,200		
Civil Service		$1,320,000	$95,000
Management and Budget		$768,100	$38,600
Environmental Quality	$813,000		
Natural Resources		$37,500	
Legislative Auditor General	$101,800	$381,100	$38,900
Treasury		$24,300	$8,900
Totals	**$60,220,800**	**$8,836,700**	**$181,400**

From our perspective, the Fiscal 2000 transfers reflect a positive shift of the charge for these functions to the General Fund, relative to the years before 1997. Under Act 79 of 1997, Act 51 was amended to eliminate most transfers from the MTF. Grants to other departments were reduced in Fiscal 1998 and 1999, and ceased in Fiscal 2000, except those to State, the Attorney General, Environmental Quality, and the Legislative Auditor General. In the MDOT annual budget, the transfer to the Secretary of State is reduced by $43 million below the full $100 million cost of administering the license-plate system. Grants from the STF and CTF have not been reduced by legislation.

Once our recommendation has been adopted, more revenue raised in the transportation sector will be retained for expenditure on the transportation infrastructure.

Specific Testimony Linked to Interdepartmental Transfers:

- Both the *MTA* and the *Community Transportation Coalition* recommended that all non-road-related earmarked administrative funding be eliminated from the Michigan Transportation Fund.

Representative Comments from CAC members with regard to Interdepartmental Transfers:

- "The League's members believe very strongly that interdepartmental transfers should be eliminated" - *MML*
- "Eliminate the diversion of transportation funds to other state departments . . . unless these grants are specifically used for transportation improvements or traffic safety initiatives."- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- ". . .transportation money should be for transportation purposes."- *American Association of Aviation Businesses*
- CAC survey response to our Interdepartmental Transfers recommendation: 81% agree, 19% disagree (see Appendix G, beginning at page 149, for detailed survey results).

ALLOW COMPETITIVE BIDDING

The Committee recommends that in the next two years, all road agencies begin to allow competitive bidding by pre-qualified bidders on all road maintenance for an amount of work that exceeds a financial threshold to be determined by the appropriate parties.

State highway maintenance is currently performed by MDOT staff in 21 counties and by the various county road commissions in the remaining 62 counties (See Map 2, page 70). In addition, more than 150 municipalities perform contract maintenance on state highways within their boundaries. In those counties and municipalities where state highway maintenance is performed by the local road agency, this is arranged through a negotiated contract, rather than the bid process which is typical of highway construction projects. According to research presented by the Citizens Research Council (see testimony information, below), other states have realized some cost savings by outsourcing, privatizing, or otherwise encouraging competitive bidding on state highway maintenance:

- Virginia will save an anticipated $22 million by contracting all routine maintenance on three Interstate highways with one vendor for five years.
- Massachusetts in a one-year pilot project saved $4.4 million in routine maintenance costs in one county, with increased frequency of some services. The pilot was subsequently expanded statewide with similar results.
- Texas responded to legislative requirements for outsourcing 25% of state highway maintenance work and saved more than $10 million.

We believe that Michigan could also benefit from such an approach. In the competitive bidding process proposed by the Committee, both public and private entities who are pre-qualified for such bidding would be eligible to make a bid. Standards for pre-qualification would be publicly available and sufficient to ensure the work will be appropriately done without being unnecessarily restrictive. Contracts subject to competitive bidding would be for an amount of work that exceeds a particular financial threshold to be determined by the appropriate parties (or the Technical Advisory Panel) as this process is implemented. Contracts would be for a three year period, and subject to results compared to measurable standards established by the Technical Advisory Panel.

We acknowledge that public/private competitive bidding is only feasible for routine maintenance, which does not involve the use of federal aid. Limitations on federal funds prohibit their use in projects that are subject to public/private competitive bidding. We further acknowledge that there is not a “level playing field” in this arena because public entities do not

pay taxes. Some private sector firms may still wish to bid on state highway maintenance despite this relative disadvantage, and should be allowed to do so.

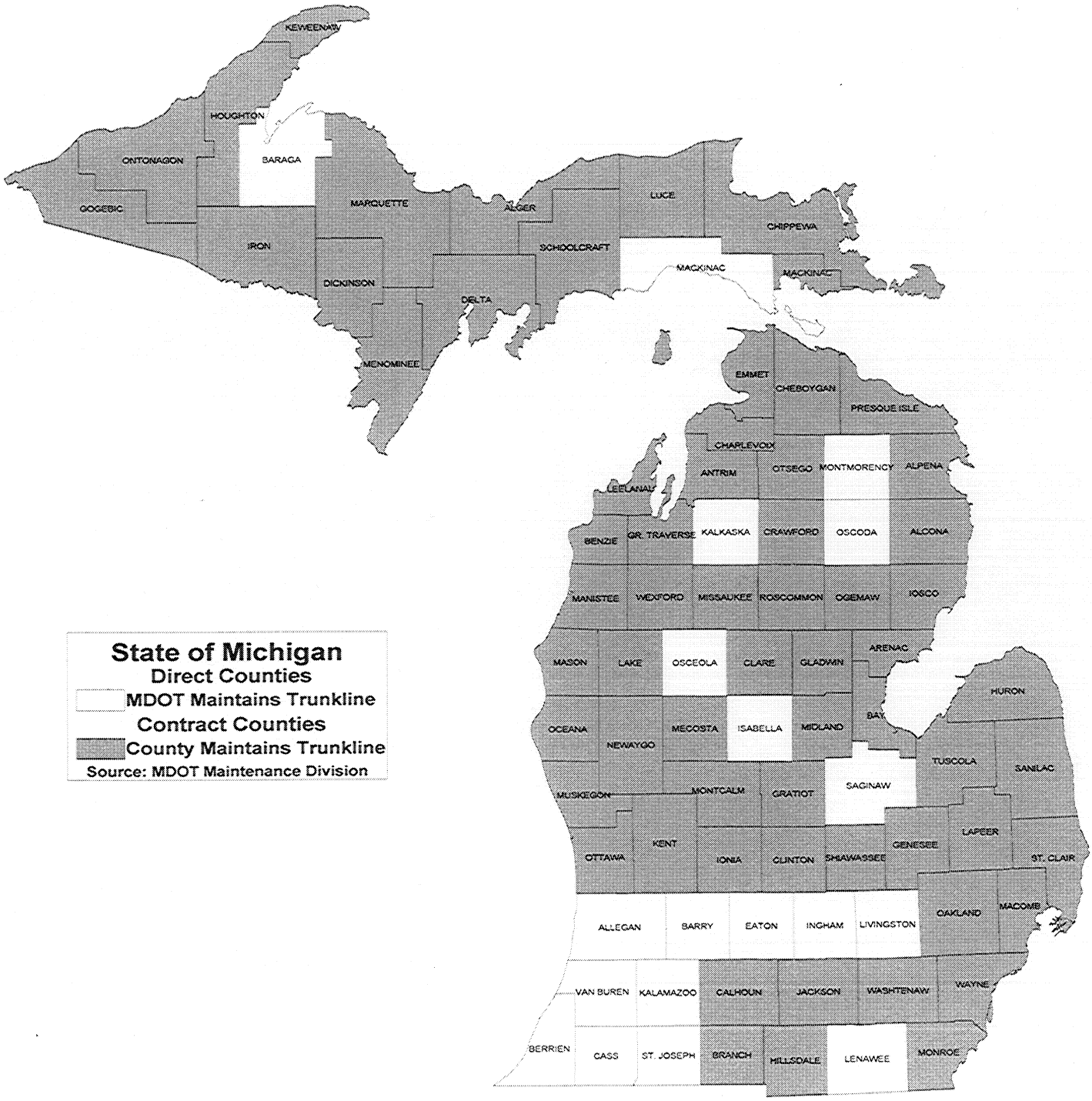
Specific Testimony linked to Competitive Bidding

- The *Michigan Business Roundtable* was very much in favor of competitive bidding for transportation maintenance and other services. They urged the committee to adopt a recommendation stating that with the exception of planning, every transportation service be competitively bid.
- *MDOT* also testified in favor of competitive bidding. They argued those reforms for increased accountability and effectiveness could be achieved with practices such as competitive bidding.
- The *Citizens Research Council,* at the committee's request, presented a study about the widespread use of competitive bidding by other state departments of transportation. The study they presented concluded that competitive bidding not only created more efficient delivery of services, it also helped to foster a spirit of creativity and accountability within the state departments of transportation themselves. The materials used in the *CRC* presentation were from the State of Washington, Joint Legislative Audit and Review Committee, Department of Transportation Highways and Rail Programs Performance Audit (Report 98-2, March 13, 1998) and the Washington Institute Foundation, Competing for Highway Maintenance: Lessons for Washington State (Report 98-2, September, 1998).
- *Dr. Taylor, of Wayne State University,* espoused the abolition of direct maintenance of highways by MDOT and a competitive bidding system with both private firms and county road commissions be introduced. He further added that maintenance subject to competitive bidding be geared toward longer term maintenance of state highways.
- The *Community Transportation Coalition* testified that if competitive bidding were to be allowed, the MDOT should allow local road agencies to compete in the bid process.

Representative Comments from CAC members with regard to Competitive Bidding:

- "Require competitive bidding for routine road maintenance. Any competitive bidding process must take into account the significant difference between public and private bidders and must be conducted on a level playing field."- *Private Sector Members of the CAC: MCPA, MCC, MRBA, AUC, MAPA*
- CAC survey response to our Competitive Bidding recommendation: 93% agree, 7% disagree (see Appendix G, beginning at page 149, for detailed survey results).

MAP 2



State of Michigan

Direct Counties

MDOT Maintains Trunkline

Contract Counties

County Maintains Trunkline

Source: MDOT Maintenance Division

IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF TRANSIT FUNDING

The Committee concurs with the recommendations of the Act 51 Transit Committee report, with the addition of clarifications and modifications.

In the area of transit, we have adopted the recommendations — with important clarifications and modifications — proposed by the separate Act 51 Transit Committee, a committee created and appointed by the State Transportation Commission. The Transit Committee spent months working with transit providers, customers, and governmental agencies in order to arrive at recommendations which accord well with our Vision, Mission, and Values.

The entire Act 51 Transit Committee report is included as Appendix H, beginning at page 151. The Transit Committee recommendations are shown below. Where we required that clarifications and modifications to these recommendations be added, these are shown offset in *italics*.

- A new base funding level shall be employed to distribute funds between or among service types, based on population and population density within the areas.

- The formula shall be based upon an initial base funding level of 75 percent of Act 51 transit funds, declining over a five-year period to 50 percent, based on population and population density within the transit service area. Fifty percent of the balance of Act 51 transit funds shall be distributed each year based on cost-efficiency factors and 50 percent based on effectiveness factors. The factors utilized to determine the effectiveness of a transit agency in providing services shall be based primarily on the level of locally-derived income collected and expended on services within the agencies service area and, as well, a measure of how well the transit dependent and aggregate potential population in the agency's service area are being served.

  — We recommend that the importance of striking a balance between the two factors, efficiency and effectiveness, be recognized. We also recommend flexibility as the formula is implemented and evaluated.

- Since a new formula may have negative financial impacts on some transit agencies it is recommended that the Legislature make transitional funds available to allow an orderly transition which accounts for a reduction in base funds over a three-year time period.

- Transit agencies shall be given the flexibility to use state transit funding for both operating assistance and capital investments.

- Any efficiency factors agreed to by MDOT and the transit industry shall be based on the concept that efficiency is defined as output divided by input. Effectiveness shall be based primarily on locally-derived income (LDI).

  — We recommend that improving customer satisfaction and addressing unmet customer needs, as appropriately measured, be recognized as the ultimate performance goals.

- MDOT shall reduce the administrative costs for the Bureau of Urban and Public Transportation (UPTRAN) to "best in class" when compared to other state programs similarly structured.

- Increase total state transit formula funding after transit agencies have implemented efficiency and effectiveness measures to the extent that these funds will continue to increase the efficiency and effectiveness of transit operations.

  — Although this recommendation was deleted from the final Act 51 Transit Committee report, we continue to endorse it. It is important that increased funding be available to transit, to reward increases in the efficiency and effectiveness of transit operations.

- Provide financial incentives to transit systems to establish coordinated regional services where the demand for such services exists. Funding for the incentives shall come from sources other than current state operating formula assistance funds. It is not the intent of this committee to duplicate services.

- The Detroit Department of Transportation (DDOT) and the Suburban Mobility Authority for the Region Transportation (SMART) shall develop a coordinated regional transit system to better serve the Detroit metropolitan area more effectively and efficiently.

- Require a competitive bidding process for the delivery of new regional transit services to ensure that private and inter-city carriers have the opportunity to provide those services.

- The Michigan Department of Transportation and the transit industry shall continue to work cooperatively to increase federal transit funding to Michigan.

- The local transit agencies shall provide matching funds for federal transit capital grants received, as prescribed by federal law.

  — In agreeing with this recommendation, it is our intent that funding passed through to local transit agencies will not be lessened.

- Consolidate (at least in an accounting process) existing transportation funds from all state departments and agencies, other than MDOT, and distribute such funds to the intended beneficiaries through a voucher system consistent with federal requirements.

- The state and transit providers shall establish, or continue to implement, a competitive bidding process for private operators to compete for the provision of existing and new transit services.

  — We add the following modifications: The competitive bidding process, whether newly established or continued in implementation, should be for public as well as private operators. Up to two years should be allowed for implementation of this recommendation, consistent with our recommendation regarding competitive bidding in the highway mode.

- Eliminate the Comprehensive Transportation Fund state operating subsidy to AMTRAK and make the funds available to local transit agencies.

- Transit agencies shall conduct periodic assessments of unmet transit needs within their communities and regions.

- Transit agencies receiving state transit funds shall develop five-year plans complete with goals and objectives that identify unmet transit needs regionally and within defined service areas. The State Transportation Commission (STC) should form a standing committee to periodically review and evaluate the revised transit funding mechanism and how well agencies are progressing in achieving goals and objectives. A standing committee of the STC should require UPTRAN to develop and publish an evaluation and reporting process that allows the taxpayers and the transit operators to see how the transit agencies do in efficiency and effectiveness measures.

  — We further recommend that the five-year plans developed by transit agencies receiving state transit funds should be fiscally constrained.

As these recommendations are successfully implemented by the transit agencies, customer satisfaction will increase and taxpayer dollars will be spent more efficiently. Our additions, clarifications, and modifications to the recommendations share common themes of increased flexibility, consistency, and customer-satisfaction focus. These are important issues as we proceed with significant changes in the way transit funds are distributed and managed.

Representative Comments from CAC members with regard to Transit:

- "[The CTF] . . . should be transitioned from a cost-based distribution system to a performance based distribution system." - *Michigan Association of Airport Executives*
- "It is imperative that some long-range planning be initiated to encourage, finance, and set in motion the necessary ingredients for mass transit in Michigan . . . " - *Michigan Association of Railroad Passengers*
- "Full ten percent of MTF should be allocated to the CTF as opposed to the eight percent the CTF currently receives" - *Michigan Public Transit Association*
- "Use tax levied on lease vehicles should go to Public Transportation instead of the general fund"- *Michigan Public Transit Association*
- "Our ability to get direct care workers to the homes of elders would be greatly enhanced by focusing on more commuter trains, bicycle lanes and bus shuttle services." - *Area Agency on Aging*